

Work Order ID 88690

July-30-12 3:29:09 PM

TRIAL FIT

88690

Page 1

Item ID: D3650-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Tunnel Top Panel Assembly
 Start Date: 7/30/12 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 7/31/12 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: W Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3650	Rev C								
100	Pick Kit	0.00							
100									
Packaging	Memo	0.00							
Packaging									
110	Small Fab	0.00							
110									
Small Fab	Memo	0.00							
Small Fab	1-Assemble as per dwg D36502- Seal all mating surfaces and all gaps using Proseal 700 fire wall sealantas per dwg D3650Batch								
120	QC5- Inspect part completeness to step on W/O	0.00							
120									
QC	Memo	0.00							
Quality Control									

Scrap Trial St

Work Order ID 88690***88690***

Page 2

July-30-12 3:29:09 PM

Item ID: D3650-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Tunnel Top Panel Assembly

Start Date: 7/30/12 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 7/31/12 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: _____	0.00							
130									
Packaging	Memo	0.00							
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

mf
12-0822

Picklist Print

July-30-12 3:29:09 PM

Page 1

Work Order ID: 88690

Parent Item: D3650-041

Start Date: 7/30/12

Required Date: 7/31/12

Parent Item Name: Tunnel Top Panel Assembly

Start Qty: 1.00

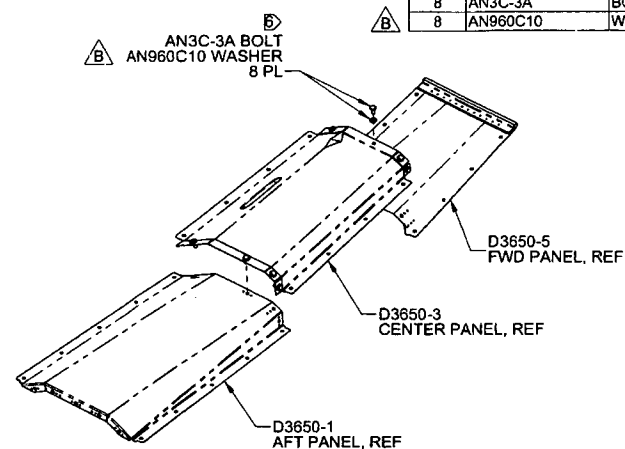
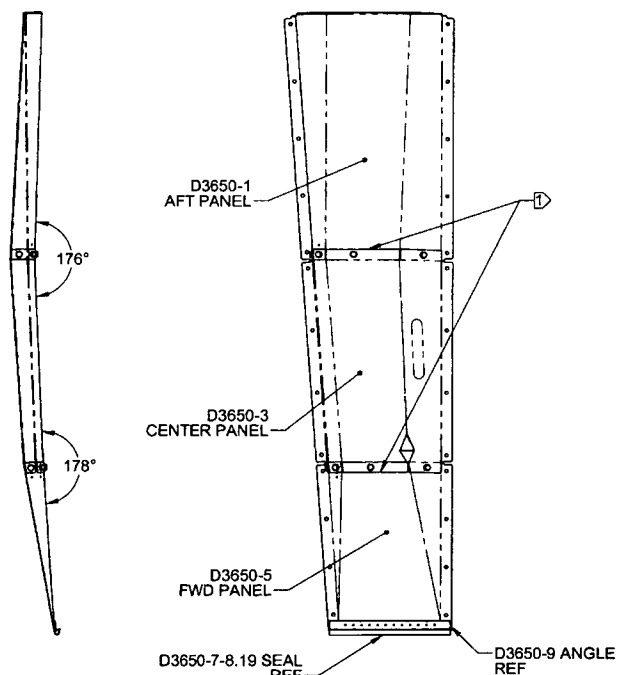
Required Qty: 1.00

Comments: IPP Rev:A New Issue 07-11-12 EC verified by: DD
 IPP Rev:B Ecn 1113P 08-01-22 DD verified by:EC
 IPP Rev:C Ecn1162 08-04-02 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN3C3A Bolt		Purchased	No			110	Each	495.0000	8	8			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				GA		70							
				118352		70							
				ST350		425							
				120187		1							
				122141		424							
D3650-1 Aft Panel		Manufactured	No			110	Each	0.0000	1	1			
D3650-3 Center Panel		Manufactured	No			110	Each	0.0000	1	1			
D3650-5 Fwd Panel		Manufactured	No			110	Each	4.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				ST189		4							
				65545		1							
				69549		3							
NAS1149C0363R Washer		Purchased	No			100	Each	4,911.0000	8	8			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				297		2000							
				122441		2000							
				ST297		2911							
				114742		2711							
				122063		200							

8 7 6 5 4 3 2 1

QTY -041	PART NUMBER	DESCRIPTION
X	D3650-041	TUNNEL TOP PANEL ASSEMBLY
1	D3650-1	AFT PANEL
1	D3650-3	CENTER PANEL
1	D3650-5	FWD PANEL
8	AN3C-3A	BOLT
8	AN960C10	WASHER



DEO ATTACHED

UNDER REVIEW
OK
07.07.08
07.06.21
RELEASE
07.11.17

D3650-041 TUNNEL TOP PANEL ASSEMBLY

- NOTES:
- 1) SEAL ALL MATING SURFACES AND ALL GAPS USING PROSEAL 700 FIRE WALL SEALANT
 - 2) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 3) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 4) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 5) IDENTIFICATION: NONE
 - 6) TORQUE FASTENERS 15 TO 25 in-lb
 - 7) WEIGHT: 3.3 lbs

4088690

C	REFORMATTED TO NEW STANDARDS; RELOCATED PART LIST (ZN D2-2); ADDED SECTION VIEW J-J & REVISE DIMENSIONS (ZN B7-5, C4-5); ADDED RECESS LOCATION & REVISED DIMENSIONS (ZN C6-6, D5-6); MS20615-4M5 WAS CR3523-4-03 & NAS1149CN432R WAS AN960C4 (ZN D5-7; B5-7; B8-7)	RF	08.10.14
B	SHEETS 1, 2 & 7: UPDATED FASTENER QUANTITIES; UPDATED VIEWS SHEETS 3 & 8: REMOVED/RELOCATED HOLES; UPDATED VIEWS SHEET 4: 1.8 WAS 1.5; 1.0 WAS 0.8; UPDATED VIEW; ADDED NOTE 8 SHEET 5: REMOVED NOTE IN C6 & ASSOCIATED DIMS; UPDATED VIEWS SHEET 6: REMOVED/RELOCATED HOLES & ADDED CUTOUT TO D3650-3F; MOVED D3650-11/-11F TO SHEET 9; ADDED DETAIL 1 SHEET 9: RELOCATED D3650-11/-11F FROM SHEET 6; UPDATED DIMS O: D3650-11/-11F	RF	08.01.07
A	NEW ISSUE	RF	07.11.07
REV.	DESCRIPTION	BY	DATE
DESIGN	RF		
DRAWN	RF		
CHECKED	RF		
MFG. APPR.	RF		
APPROVED	RF		
DE APPR.	RF		
DATE	08.10.14		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.
D3650

TITLE
TOP PANEL ASSEMBLY

SCALE
1:8

COPYRIGHT © 2007 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

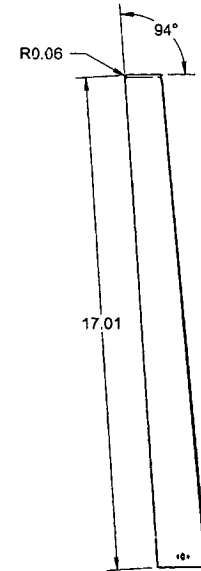
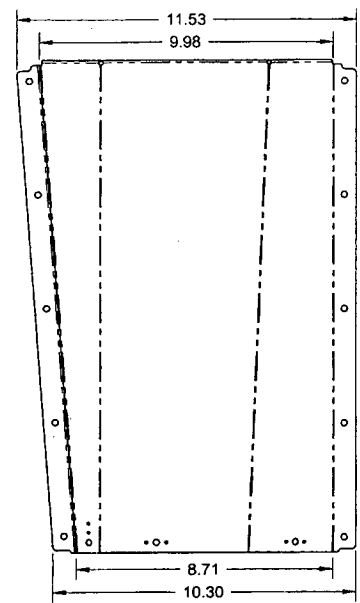
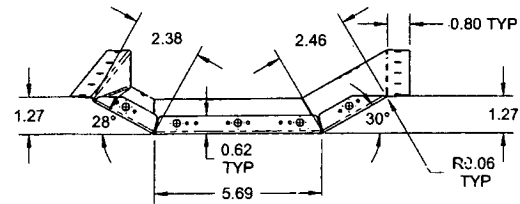
QTY	PART NUMBER	DESCRIPTION
-1		
X	D3650-1	AFT PANEL
1	D3650-1B	AFT PANEL BENT PART
18	MS20427M3-3	RIVET
6	MS21060-3K	NUTPLATE
3	MS21062-3K	NUT PLATE

MS21060-3K NUTPLATE
MS20427M3-3 RIVET, 2 PL
6 PL

D3650-1B
AFT PANEL BENT PART

MS21062-3K NUTPLATE
MS20427M3-3 RIVET, 2PL
3 PL

D3650-1 AFT PANEL



D3650-1B AFT PANEL BENT PART
(MAKE FROM D3650-1F FLAT PATTERN)

DEO ATTACHED

UNDER REVIEW
OK 09.02.05
09.06.24

RELEASED
06/11/17

90 3.67

- NOTES:
- 1) FINISH: NONE
 - 2) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 3) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 4) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 5) IDENTIFICATION: NONE
 - 6) WEIGHT: 1.3 lbs

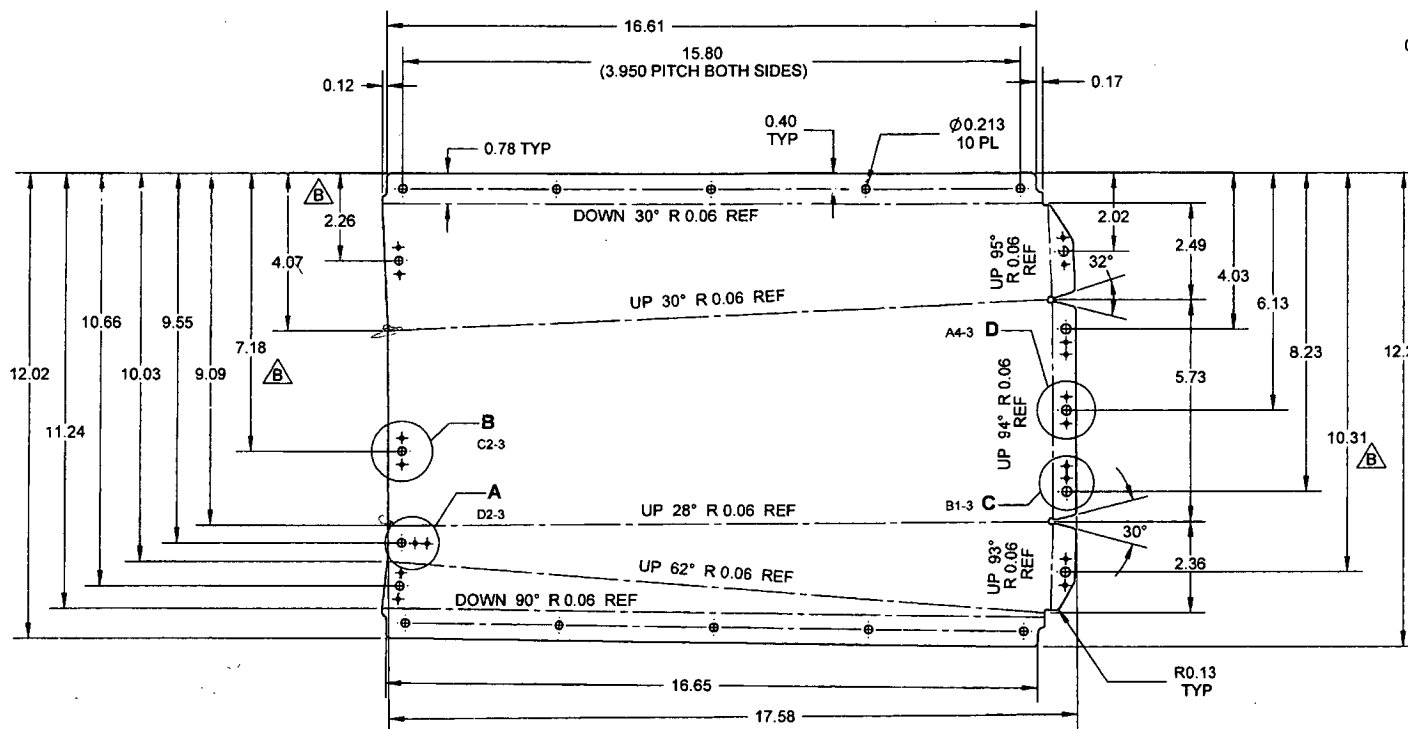
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3650	SHEET 2 OF 9
APPROVED		TITLE	SCALE
DE APPR.		TOP PANEL ASSEMBLY	NTS
DATE	08.10.14	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

8 7 6 5 4 3 2 1

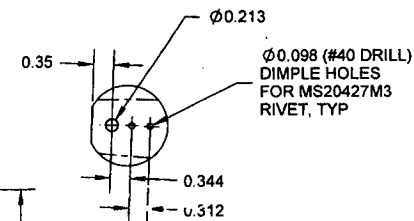
22

22

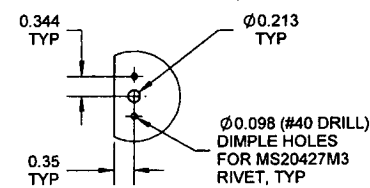
22



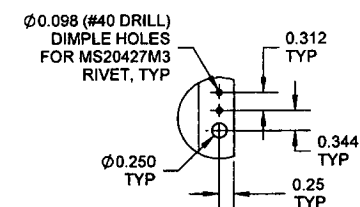
D3650-1F FLAT PATTERN



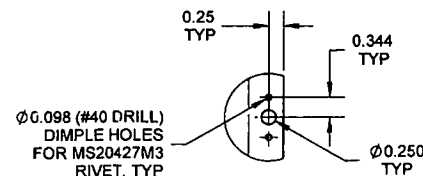
DETAIL A C7-3
SCALE 1.5X



DETAIL B C7-3
SCALE 1.5X



DETAIL C C4-3
SCALE 1.5X






DETAIL D C4-3
SCALE 1.5X

- NOTES:**
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 THICK (26 GAUGE) SHEET, PER MIL-S-5059 OR AMS 5513/5524 (REF. DART SPEC. M304S26GA)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 1.22 lbs

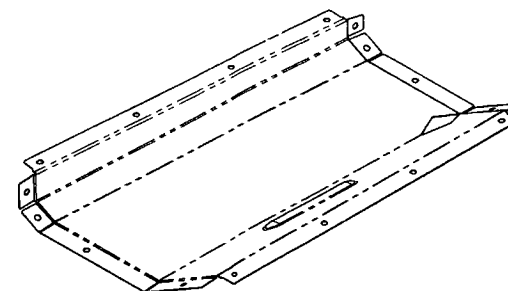
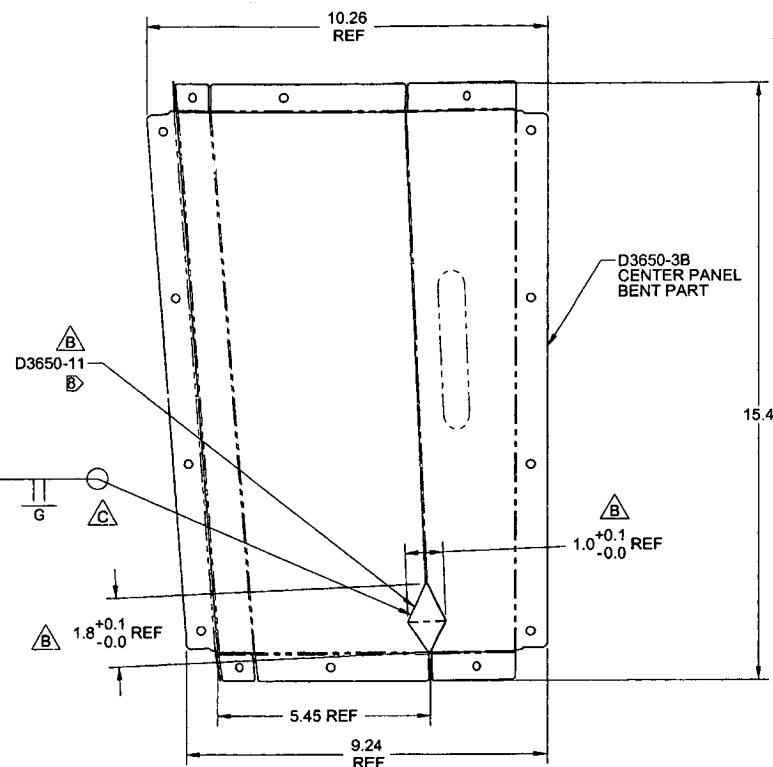
UNDER REVIEW

DEO ATTACHED

RELEASED

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3650	SHEET 3 OF 8
APPROVED		TITLE	SCALE
DE APPR.		TOP PANEL ASSEMBLY	NTS
DATE	08.10.14	COPYRIGHT © 2007 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

QTY	PART NUMBER	DESCRIPTION
X	D3650-3	CENTER PANEL
1	D3650-3B	CENTER PANEL BENT PART
1	D3650-11	FILLER PLATE



D3650-3 CENTER PANEL
(LOOKING FROM OUT SIDE SURFACE)

DEO ATTACHED

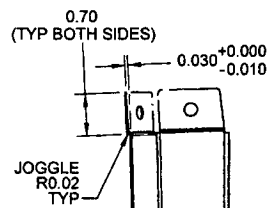
RELEASED
08/11/14

NOTES:

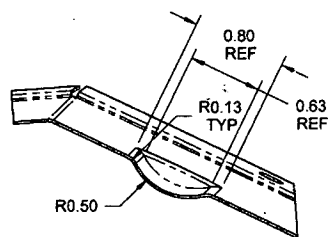
- 1) WELD PER QSI 004
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.0 lb
- 8) TRIM D3650-11 TO FIT AS REQUIRED

UNDER REVIEW

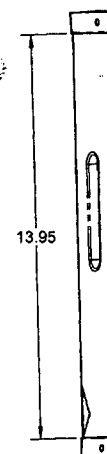
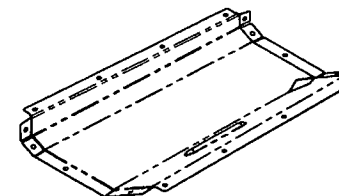
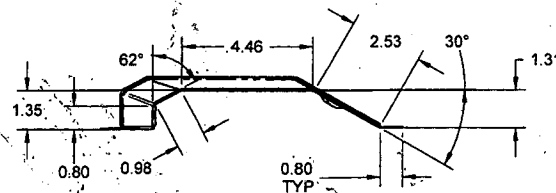
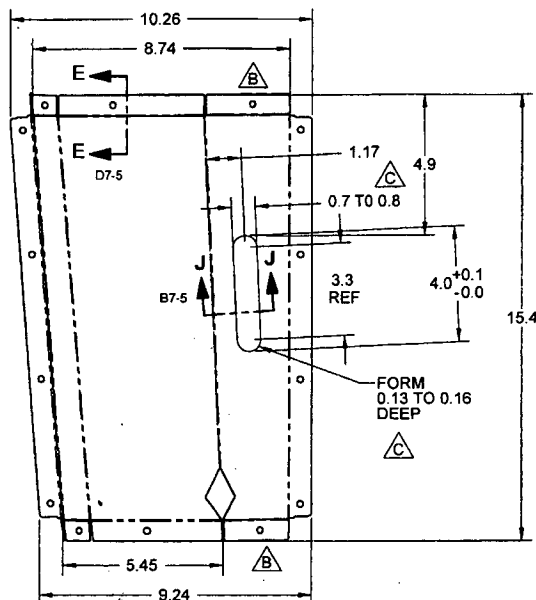
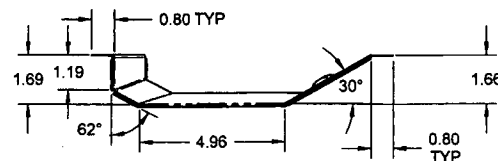
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3650	SHEET 4 OF 9
APPROVED		TITLE	SCALE
DE APPR.		TOP PANEL ASSEMBLY	NTS
DATE	08.10.14	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



SECTION E-E D5-5
SCALE 2X







SECTION J-J C5-5
SCALE 3.5X



- NOTES:
1) FINISH: NONE
2) TOLERANCES: PER DART QSI.018 UNLESS OTHERWISE NOTED
3) UNITS: INCHES UNLESS OTHERWISE NOTED
4) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
5) IDENTIFICATION: NONE

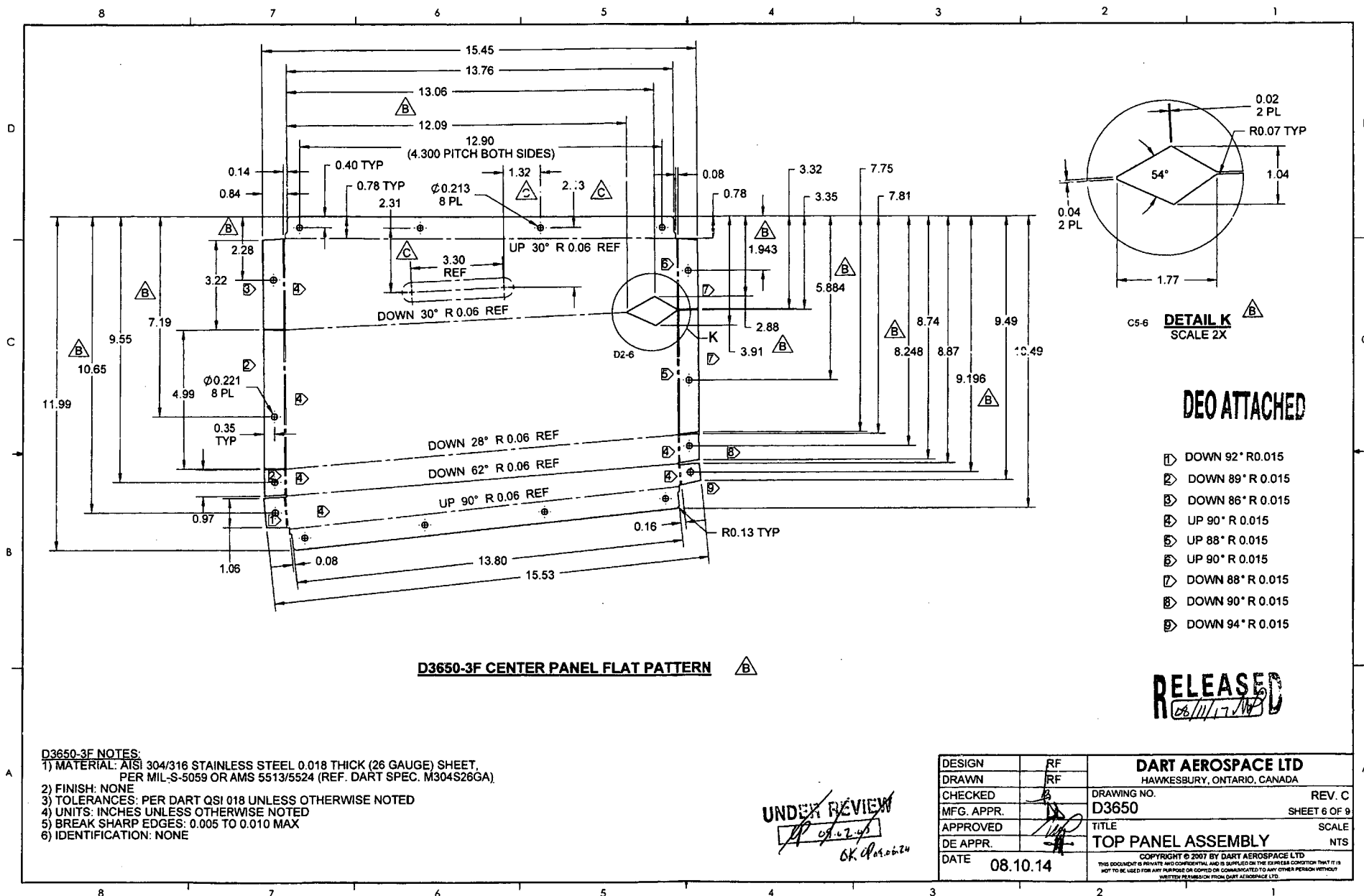
D3650-3B CENTER PANEL BENT PART
(MAKE FROM D3650-3F FLAT PATTERN)

UNDER REVIEW

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3650	SHEET 5 OF 9
APPROVED		TITLE	SCALE
DE APPR.		TOP PANEL ASSEMBLY	NTS
DATE	08.10.14	COPYRIGHT © 2007 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

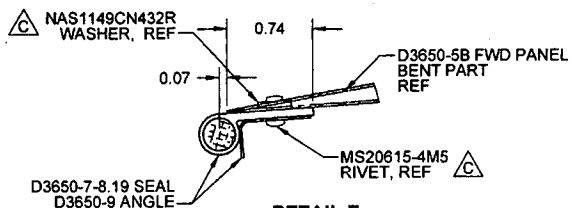
DEO ATTACHED

RELEASED

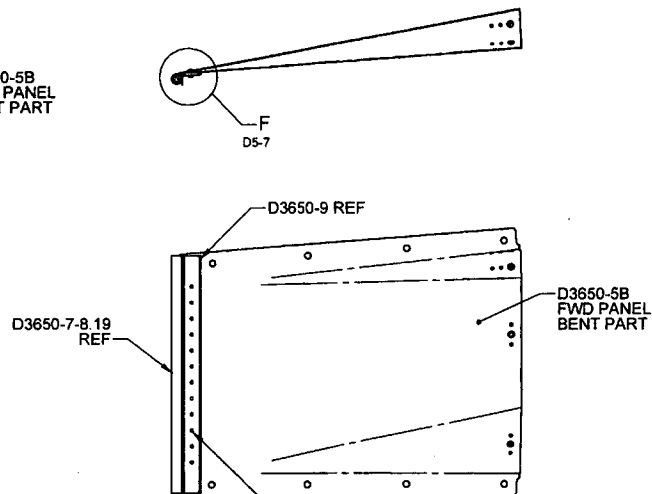
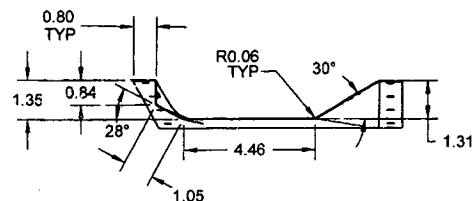


MS21062-3K NUTPLATE
MS20427M3-3 RIVET, 2 PL
2 PL

MS21060-3K NUTPLATE
MS20427M3-3 RIVET, 2 PL
2 PL

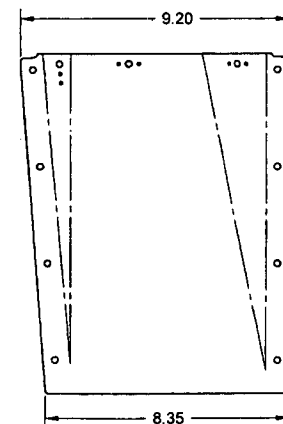


DETAIL F
SCALE 3.5X



CENTRE D3650-7-9 ON D3650-5B &
TRANSFER Ø0.129 (#30 DRILL) HOLES
FROM D3650-9 TO D3650-7 & D3650-5B
AS SHOWN
INSTALL
MS20615-4M5 RIVET
NAS1149CN432R WASHER
12 PL

D3650-5 FWD PANEL



D3650-5B FWD PANEL BENT PART
(MAKE FROM D3650-5F FLAT PATTERN)

DEO ATTACHED

RELEASED
08/11/17 MB

PART LIST

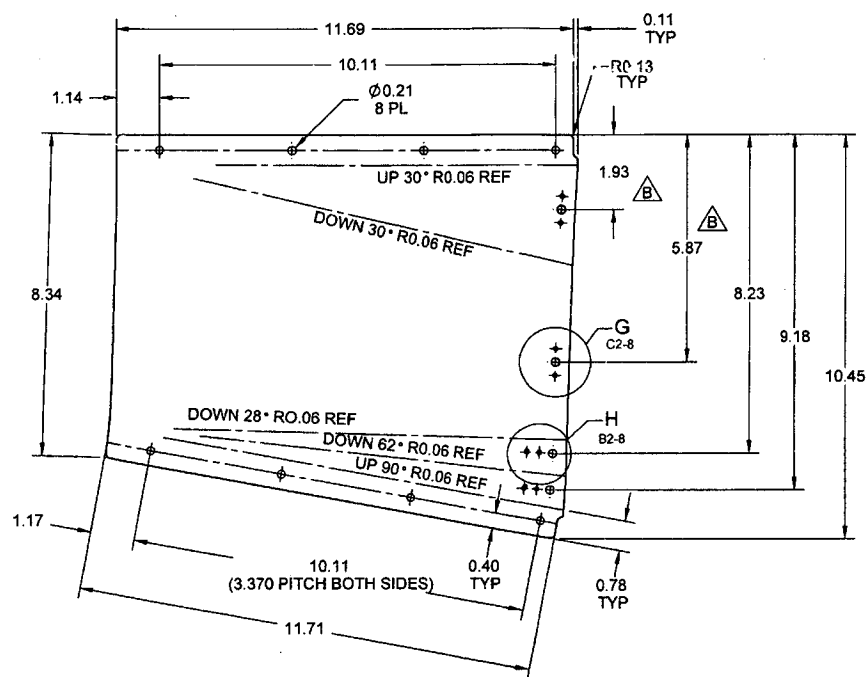
QTY -S	PART NUMBER	DESCRIPTION
X	D3650-5	FWD PANEL
1	D3650-5B	FWD PANEL BENT PART
1	D3650-7-8.19	SEAL
1	D3650-9	ANGLE
12	NAS1149CN432R	WASHER
12	MS20615-4M5	RIVET
8	MS20427M3-3	RIVET
2	MS21060-3K	NUTPLATE
2	MS21062-3K	NUTPLATE

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 THICK (26 GAUGE) SHEET,
PER MIL-S-5059 OR AMS 5513/5524 (REF. DART SPEC. M304S26GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.8 lbs

UNDER REVIEW
07/07/08/05
02/09/08/05

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	DRAWING NO. D3650	REV. C SHEET 7 OF 9
CHECKED		TITLE TOP PANEL ASSEMBLY	SCALE NTS
MFG. APPR.		COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DE APPR.		DATE 08.10.14	

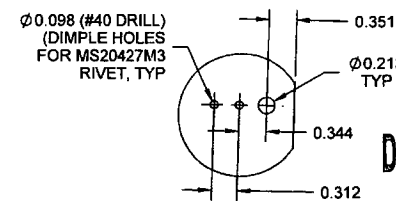
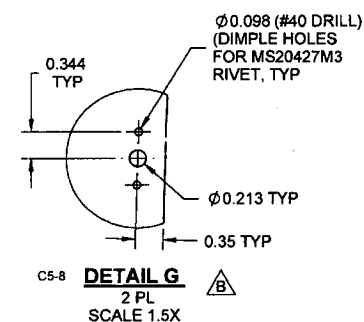
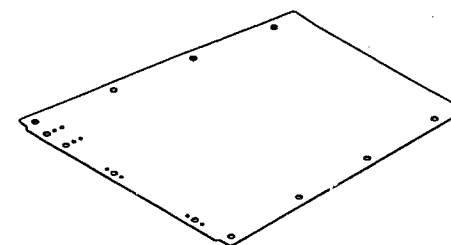


D3650-5F FLAT PATTERN

NOTES:





- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 THICK (26 GAUGE) SHEET, PER MIL-S-5059 OR AMS 5513/5524 (REF. DART SPEC. M304S26GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.6 lb

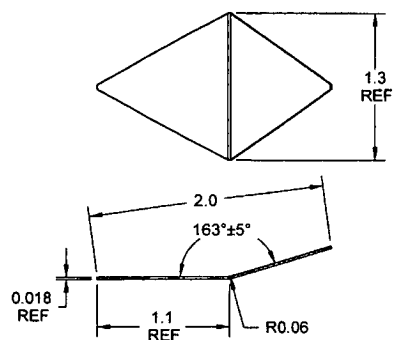
UNDER REVIEW
[Signature]
 CK 4/11/17



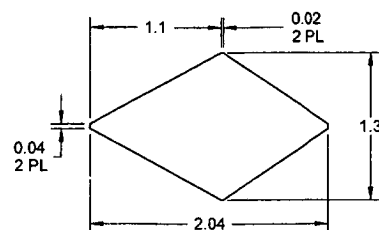
DEO ATTACHED

RELEASED
 08/11/17

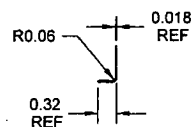
DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3650	SHEET 8 OF 9
APPROVED		TITLE	SCALE
DE APPR.		TOP PANEL ASSEMBLY	NTS
DATE	08.10.14	COPYRIGHT © 2007 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			



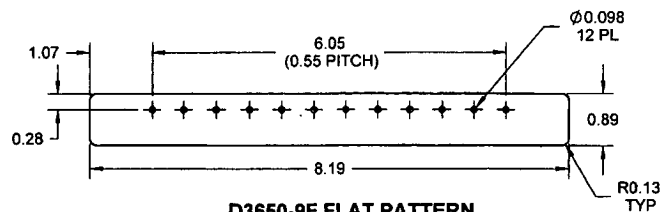
D3650-11 FILLER PLATE
(MAKE FROM D3650-11F FLAT PATTERN)



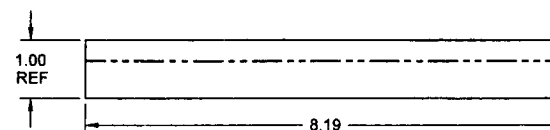
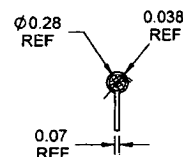
D3650-11F FLAT PATTERN



D3650-9 ANGLE
(MAKE FROM D3650-9F FLAT PATTERN)



D3650-9F FLAT PATTERN



D3650-7-8.19 SEAL

D3650-7-8.19 NOTES:

- 1) MATERIAL: P/N 8168-1 TADPOLE SEAL (REF. BELL P/N 120-104-1)
POSSIBLE SUPPLIER: EAGLE COPTERS OR BELL
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.05 lb
- 8) PART NUMBER: D3650-7-X.XX
WHERE X.XX = LENGTH IN INCHES
EG. 12.50" LONG = D3650-7-12.50

D3650-9 & D3650-11 NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 THICK (26 GAUGE) SHEET,
PER MIL-S-5059 OR AMS 5513/5524 (REF. DART SPEC. M304S26GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) D3650-9 WEIGHT: 0.05 lb
D3650-11 WEIGHT: 0.007 lb

UNDER REVIEW
08/07/08
OK 08.10.14

DEO ATTACHED

RELEASED
08/07/08

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D3650	REV. C
MFG. APPR.		TITLE TOP PANEL ASSEMBLY	SHEET 9 OF 9
APPROVED		SCALE	NTS
DE APPR.		COPYRIGHT © 2007 BY DART AEROSPACE LTD	
DATE	08.10.14	THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DRAWING NO. D3650	TITLE TOP PANEL ASSEMBLY	REV. C	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D3650-C-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN CP	CHECKED	MFG. APPR. <i>EC</i>	APPROVED <i>MD</i>	DE APPR. <i>MD</i>		
DATE 09.06.12	DATE 04.06.15	DATE 09.06.15	DATE 09/06/15	DATE 09/06/15		

TO AMEND D3650-5 FWD PANEL:

REF PAR 09-008. THE QTY(12) NAS1149CN432R WASHERS ARE REPLACED WITH QTY(1) D3893-1 DOUBLER. THE QTY(12) MS20615-4M5 RIVETS ARE REPLACED WITH QTY(12) NAS9307M-4-03 RIVETS. LOCATION OF THE DOUBLER IS SHOWN IN THE AMENDED DETAIL F (DWG SHEET 7) BELOW. THE PARTS LIST FOR D3650-5 IS AMENDED AS FOLLOWS:

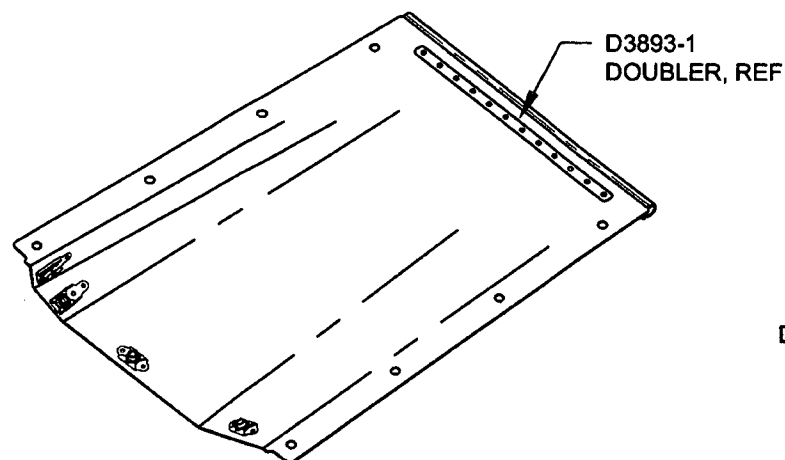
IS:

QTY	PART NUMBER	DESCRIPTION
-5		
1	D3893-1	DOUBLER
12	NAS9307M-4-03	RIVET (OR CR3523-4-03)

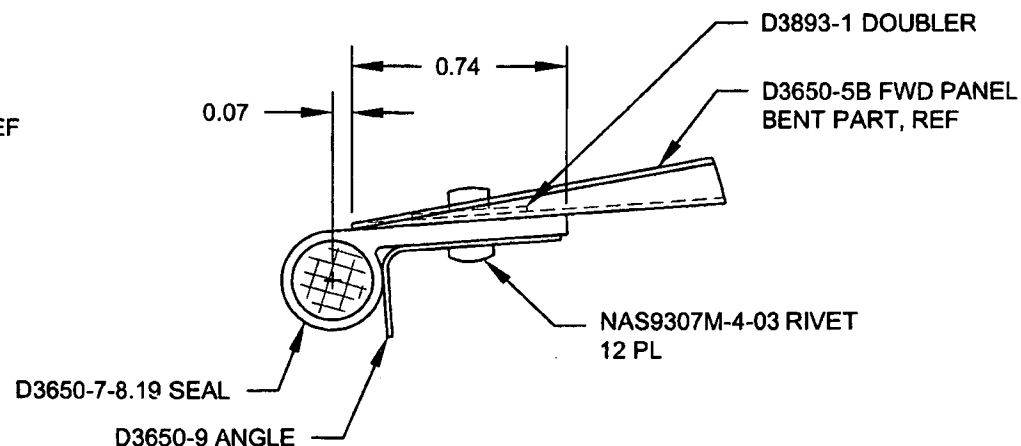
WAS:

QTY	PART NUMBER	DESCRIPTION
-5		
12	NAS1149CN432R	WASHER
12	MS20615-4M5	RIVET

RELEASED
09/06/15



D3650-5 FWD PANEL



DETAIL F C5-7
SCALE 3.5X

